FIG. 1

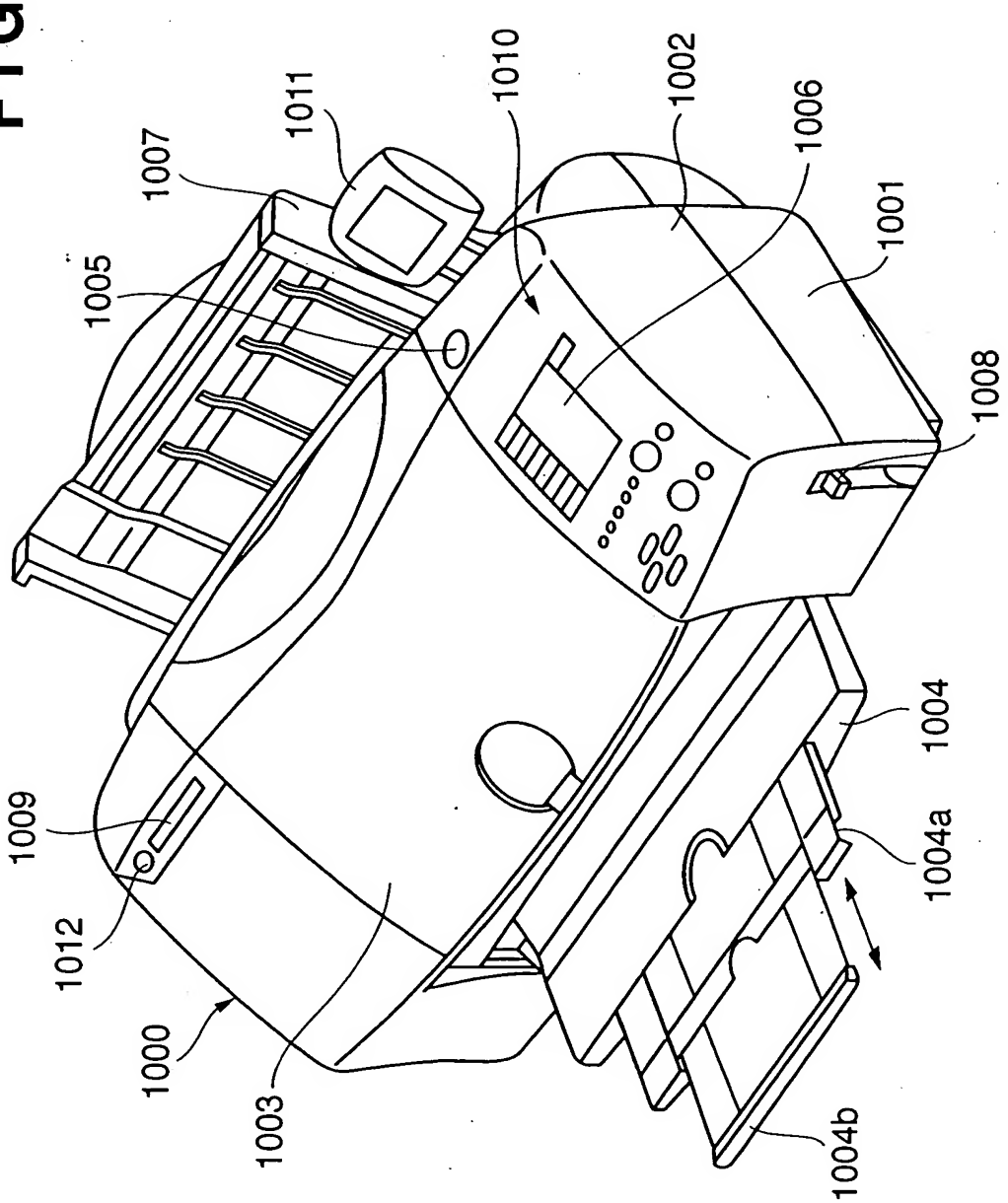

1011
1010
1002
1007
1006
1005
1001
1008
1009
1004
1004a
1012
1000
1003
1004b

FIG. 2

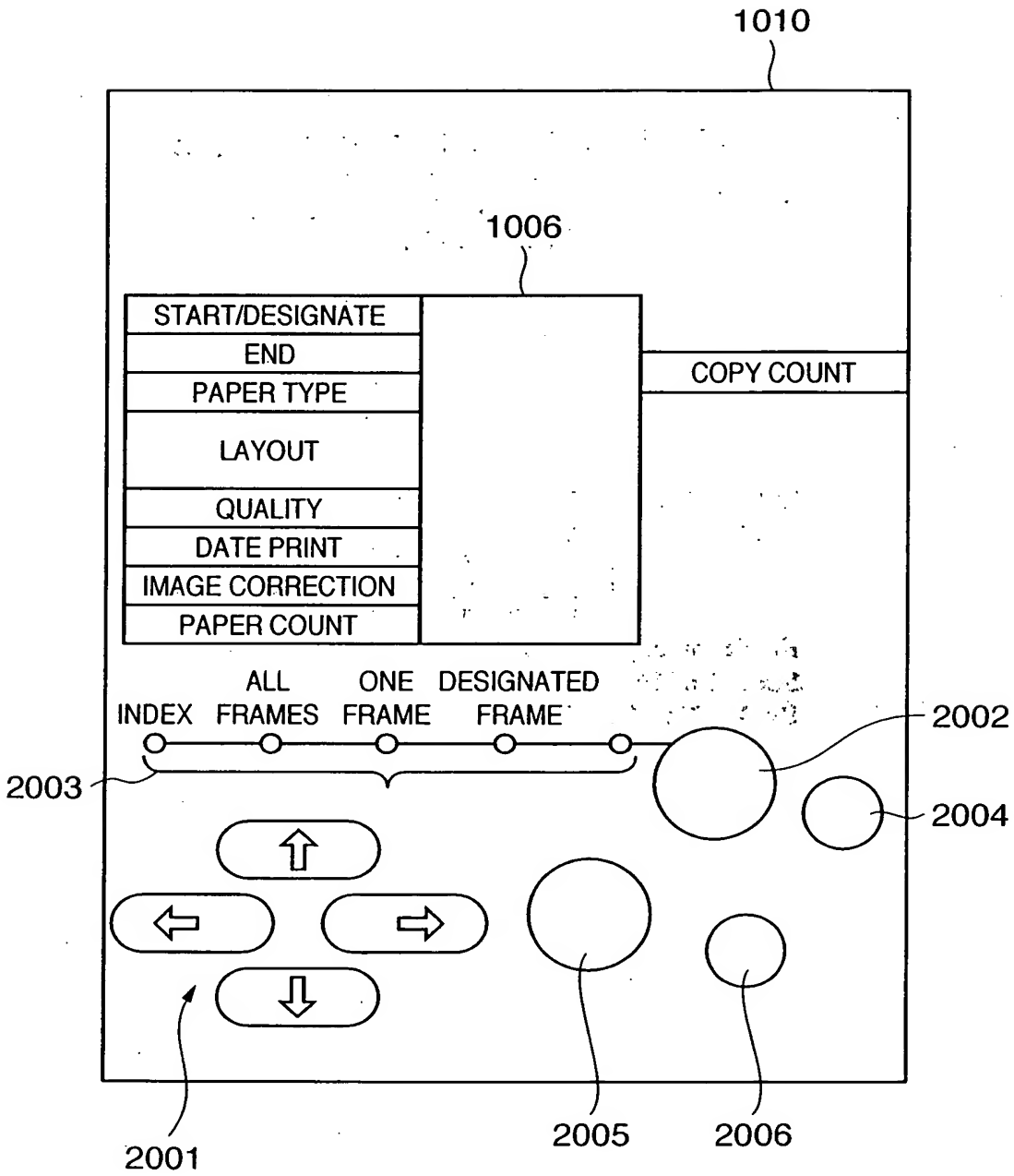

1010
1006
START/DESIGNATE
END
PAPER TYPE
LAYOUT
QUALITY
DATE PRINT
IMAGE CORRECTION
PAPER COUNT
COPY COUNT
INDEX
ALL FRAMES
ONE FRAME
DESIGNATED FRAME
2002
2003
2004
2001
2005
2006

FIG. 3

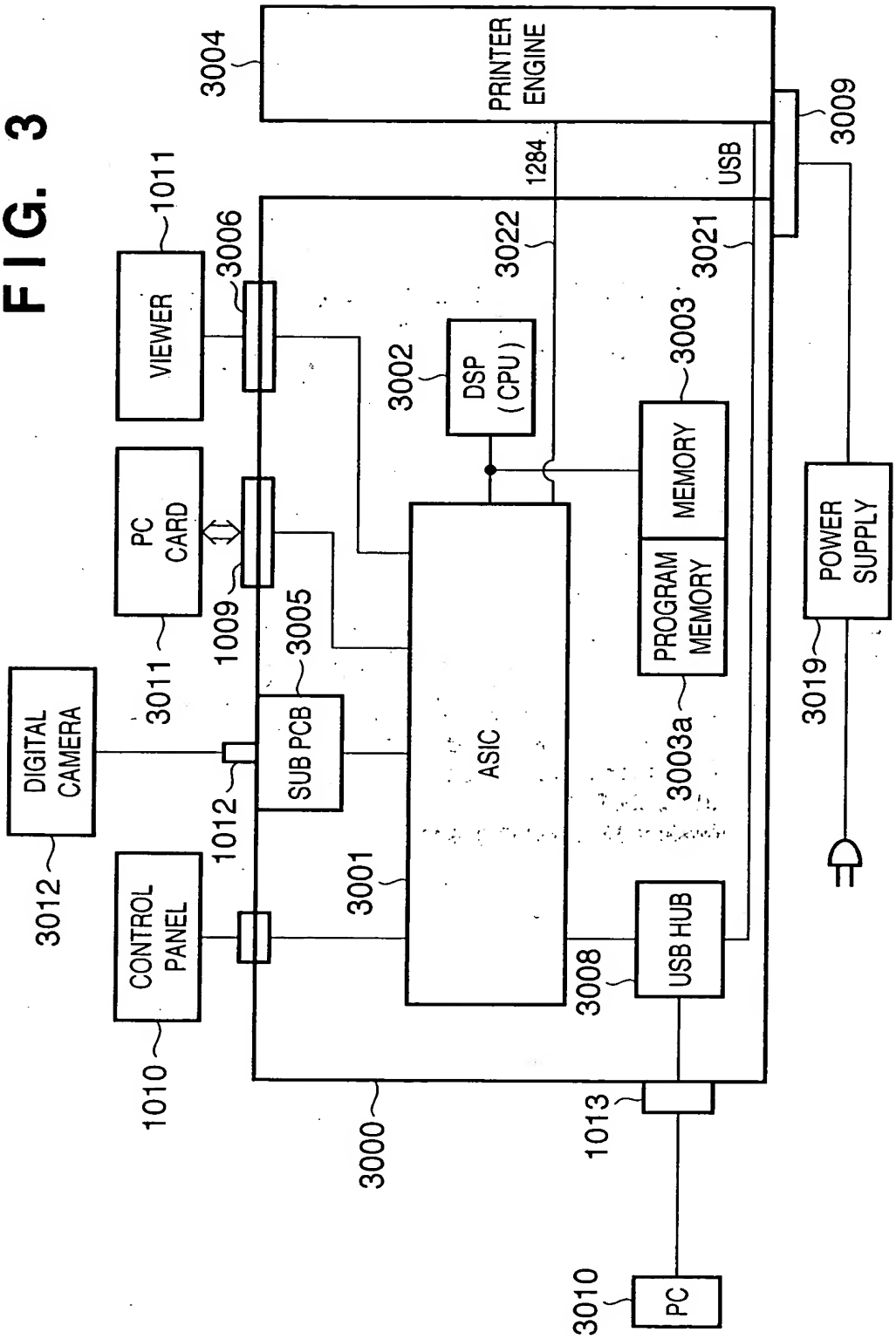

3004
PRINTER ENGINE
1284
USB
3009
1011
VIEWER
3006
3022
3021
3002
DSP (CPU)
3003
MEMORY
PC CARD
1009
3005
PROGRAM MEMORY
POWER SUPPLY
3011
3019
DIGITAL CAMERA
SUB PCB
ASIC
3003a
1012
3012
3001
CONTROL PANEL
USB HUB
3008
1010
3000
1013
3010
PC

FIG. 4

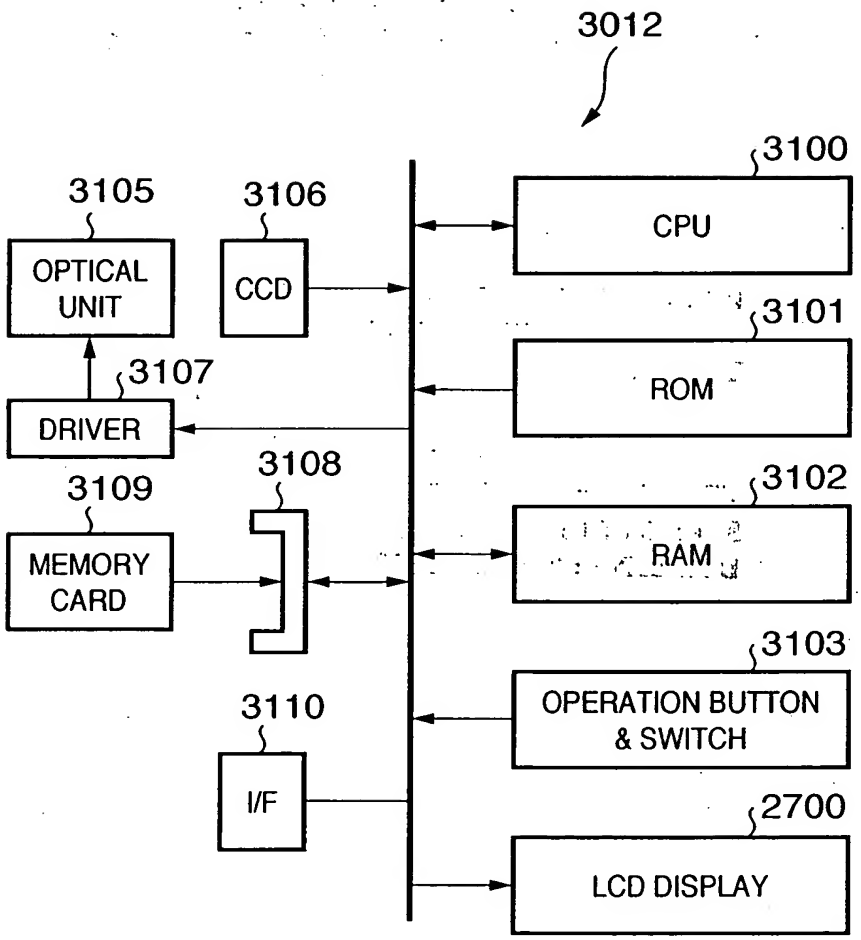

3012
3100
CPU
3105
OPTICAL UNIT
3106
CCD
3101
ROM
3107
DRIVER
3108
3109
MEMORY CARD
3102
RAM
3103
OPERATION BUTTON & SWITCH
3110
I/F
2700
LCD DISPLAY

FIG. 5

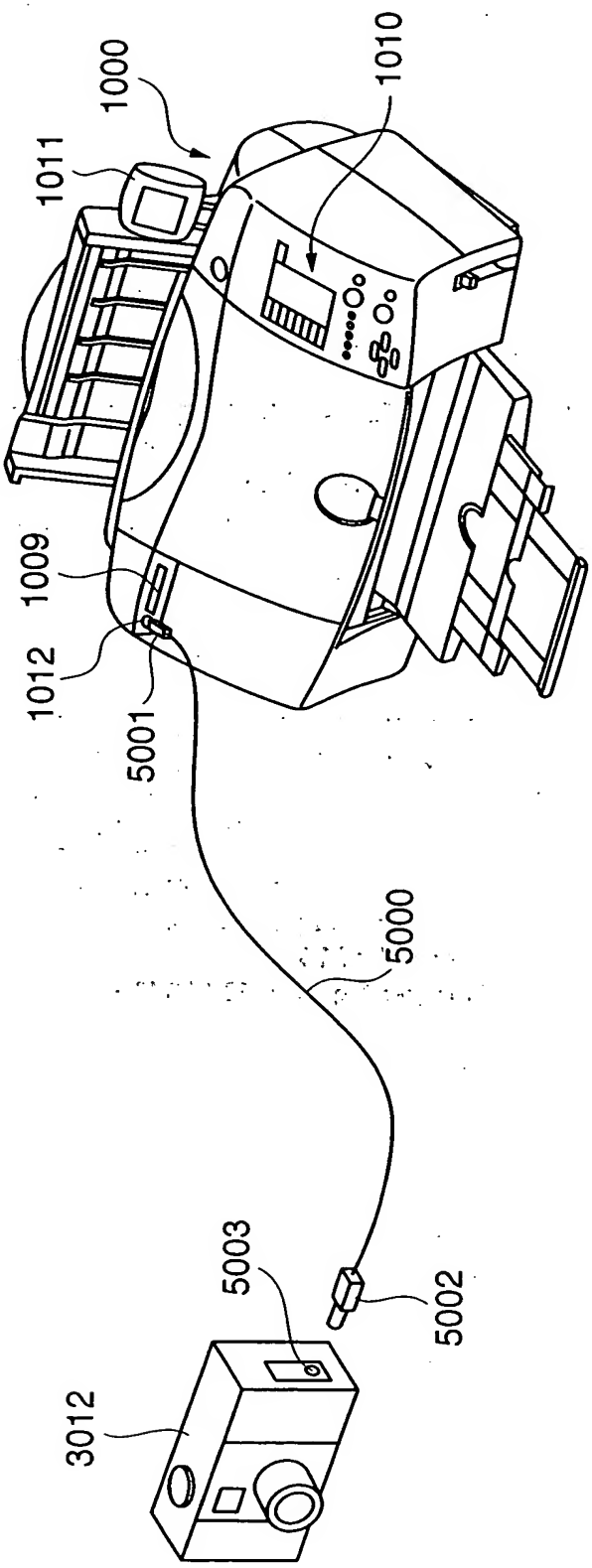


FIG. 6

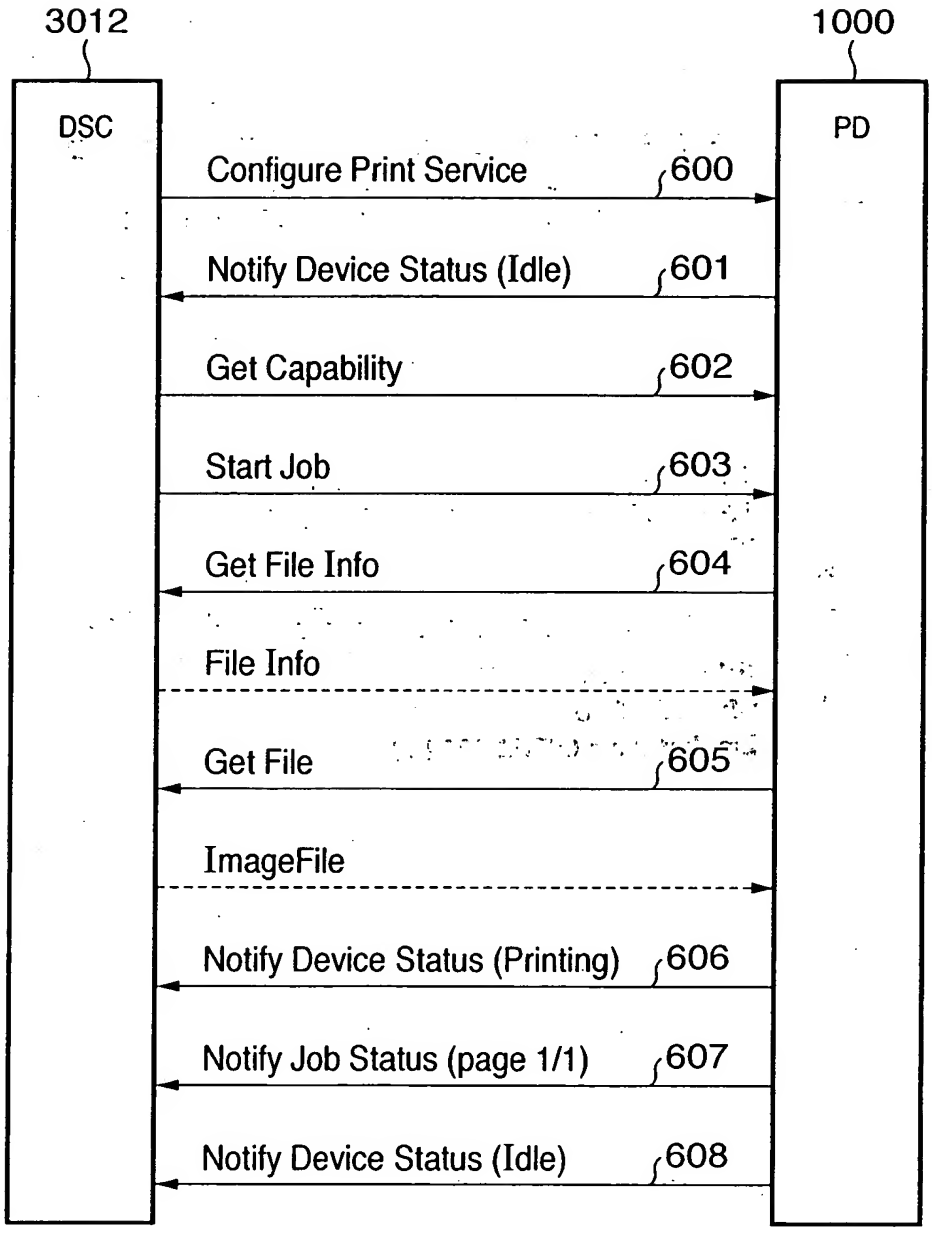

3012
1000
DSC
PD
Configure Print Service
600
Notify Device Status (Idle)
601
Get Capability
602
Start Job
603
Get File Info
604
File Info
Get File
605
ImageFile
Notify Device Status (Printing)
606
Notify Job Status (page 1/1)
607
Notify Device Status (Idle)
608

FIG. 7

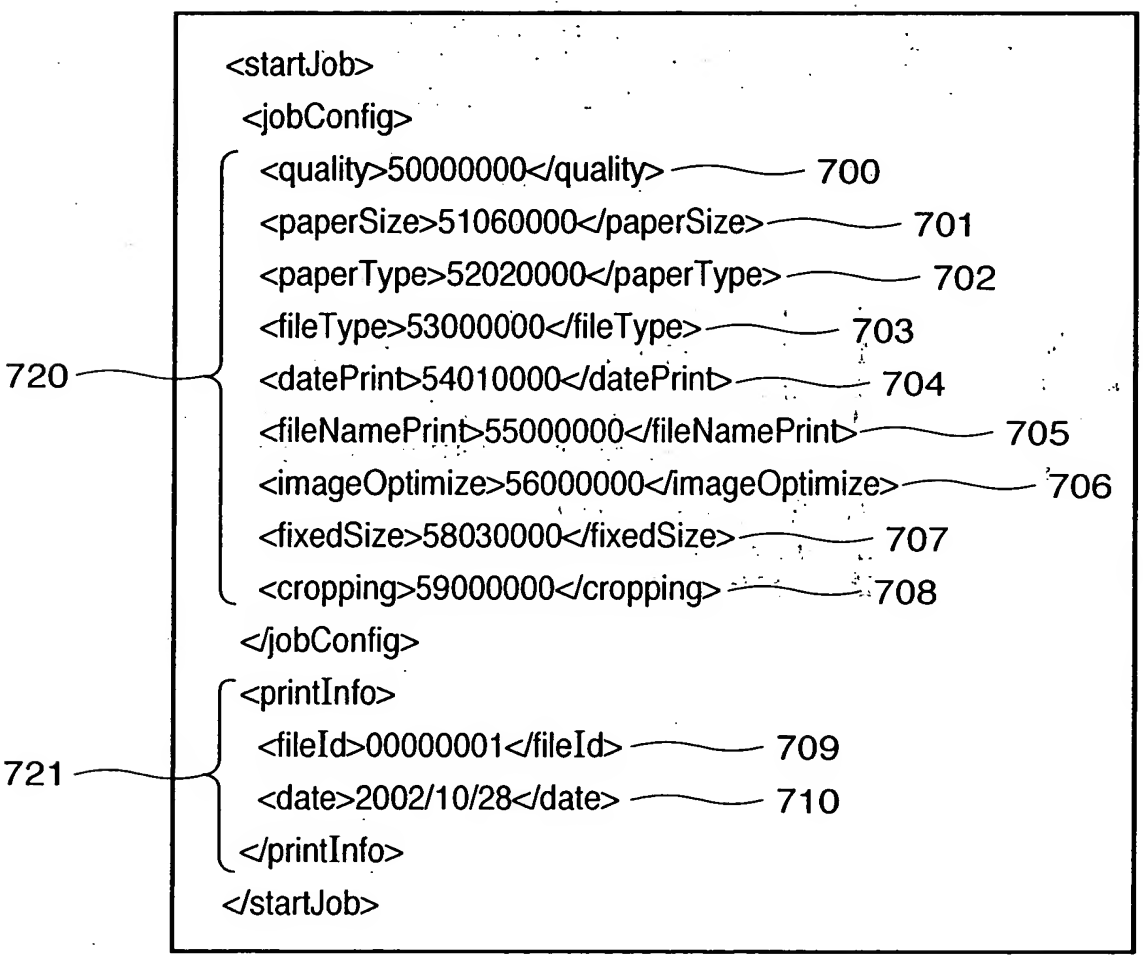

<startJob>
<jobConfig>
<quality>50000000</quality> 700
<paperSize>51060000</paperSize> 701
<paperType>52020000</paperType> 702
<fileType>53000000</fileType> 703
720
<datePrint>54010000</datePrint> 704
<fileNamePrint>55000000</fileNamePrint> 705
<imageOptimize>56000000</imageOptimize> 706
<fixedSize>58030000</fixedSize> 707
<cropping>59000000</cropping> 708
</jobConfig>
<printInfo>
721
<fileId>00000001</fileId> 709
<date>2002/10/28</date> 710
</printInfo>
</startJob>

FIG. 8A

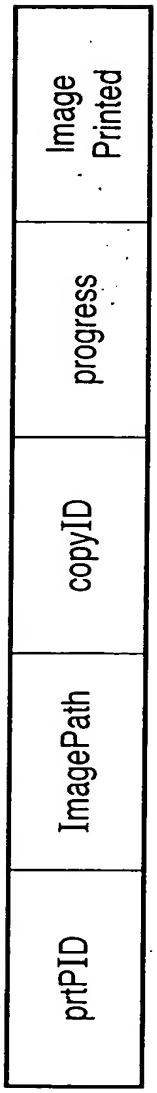

prtPID
ImagePath
copyID
progress
Image Printed

FIG. 8B

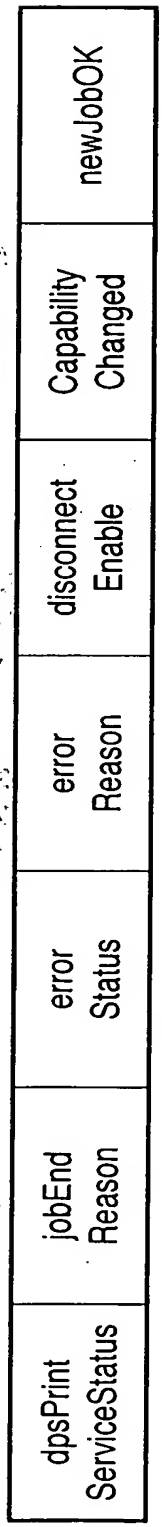

dpsPrint ServiceStatus
jobEnd Reason
error Status
error Reason
disconnect Enable
Capability Changed
newJobOK

FIG. 9

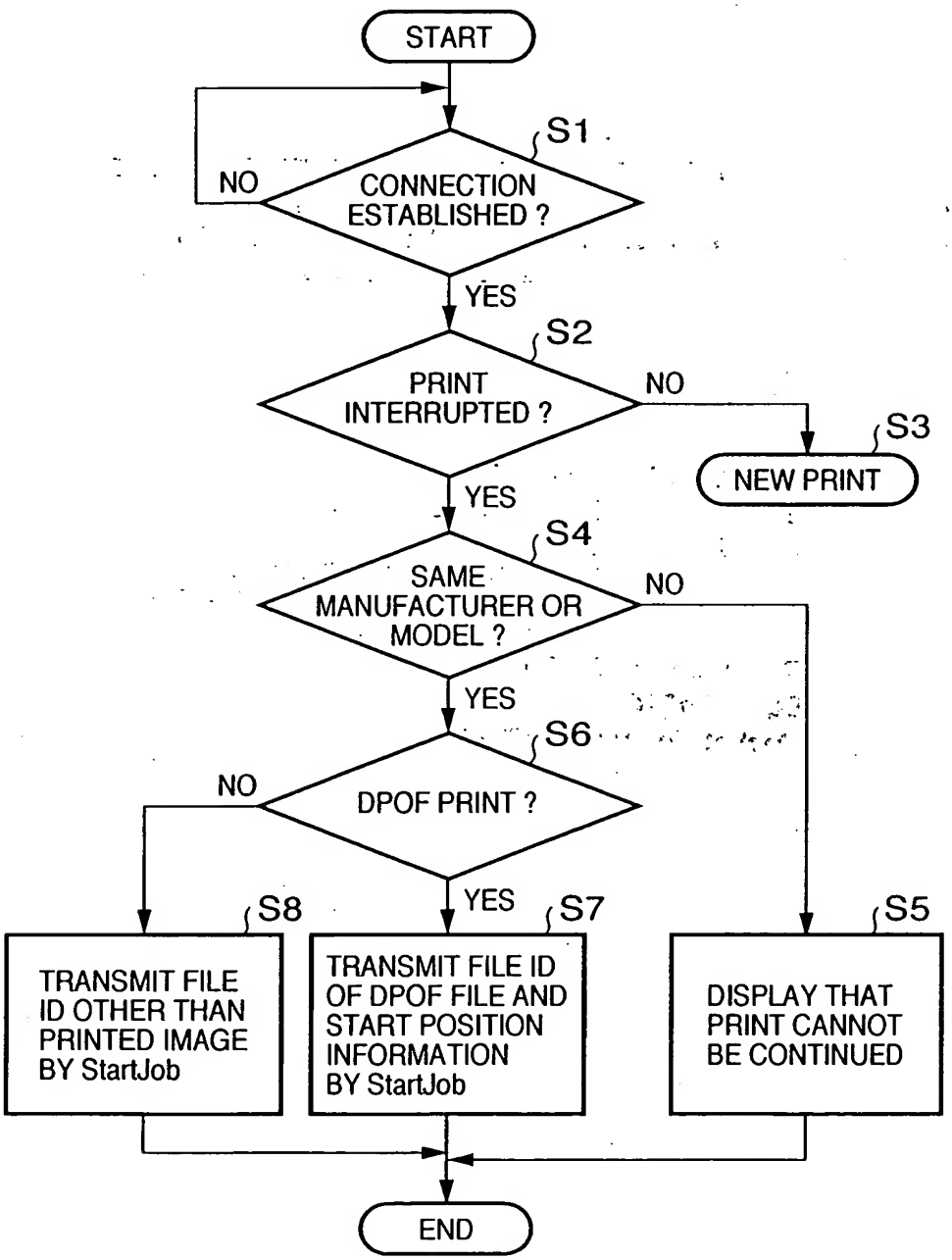

START
S1
CONNECTION ESTABLISHED ?
NO
YES
S2
PRINT INTERRUPTED ?
NO
S3
NEW PRINT
YES
S4
SAME MANUFACTURER OR MODEL ?
NO
YES
S6
DPOF PRINT ?
NO
YES
S8
TRANSMIT FILE ID OTHER THAN PRINTED IMAGE BY StartJob
S7
TRANSMIT FILE ID OF DPOF FILE AND START POSITION INFORMATION BY StartJob
S5
DISPLAY THAT PRINT CANNOT BE CONTINUED
END

FIG. 10

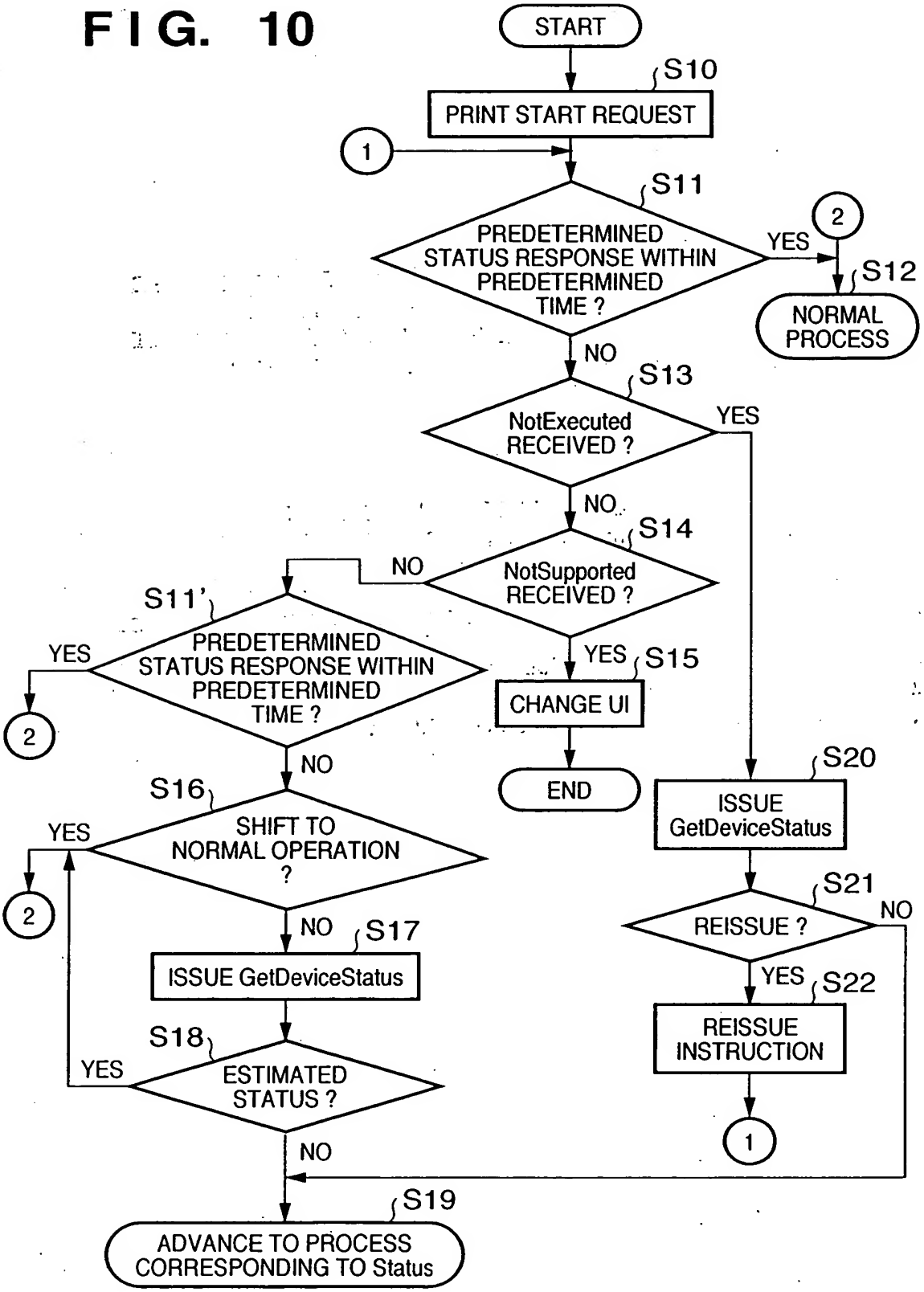

START
S10
PRINT START REQUEST
1
S11
PREDETERMINED STATUS RESPONSE WITHIN PREDETERMINED TIME ?
YES
2
S12
NORMAL PROCESS
NO
S13
NotExecuted RECEIVED ?
YES
NO
S14
NotSupported RECEIVED ?
NO
S11'
PREDETERMINED STATUS RESPONSE WITHIN PREDETERMINED TIME ?
YES
2
YES
S15
CHANGE UI
END
NO
S16
SHIFT TO NORMAL OPERATION ?
YES
2
NO
S17
ISSUE GetDeviceStatus
S18
ESTIMATED STATUS ?
YES
NO
S19
ADVANCE TO PROCESS CORRESPONDING TO Status
S20
ISSUE GetDeviceStatus
S21
REISSUE ?
NO
YES
S22
REISSUE INSTRUCTION
1

FIG. 11

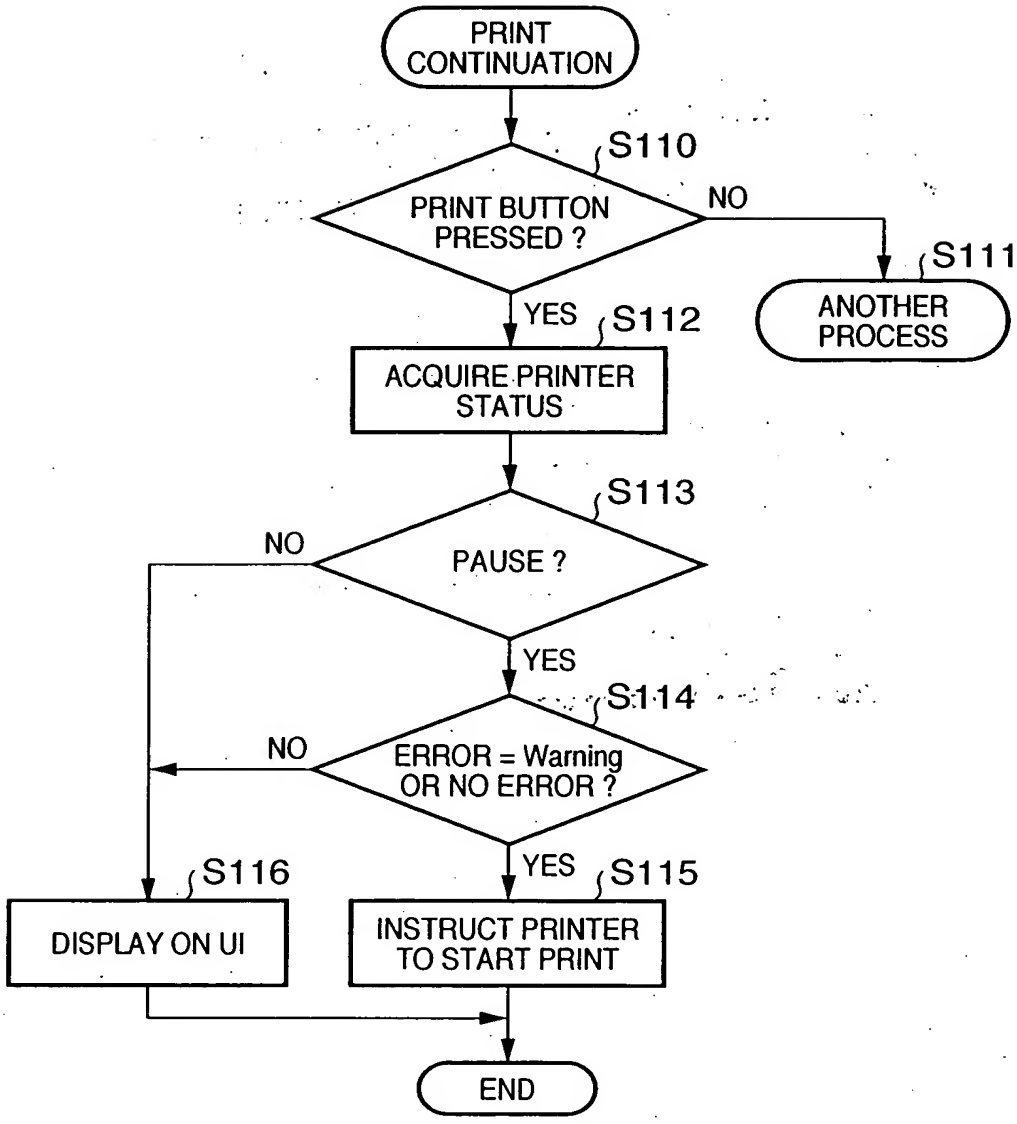

PRINT CONTINUATION
S110
PRINT BUTTON PRESSED ?
NO
S111
ANOTHER PROCESS
YES
S112
ACQUIRE PRINTER STATUS
S113
PAUSE ?
NO
YES
S114
ERROR = Warning OR NO ERROR ?
NO
YES
S115
INSTRUCT PRINTER TO START PRINT
S116
DISPLAY ON UI
END

FIG. 12

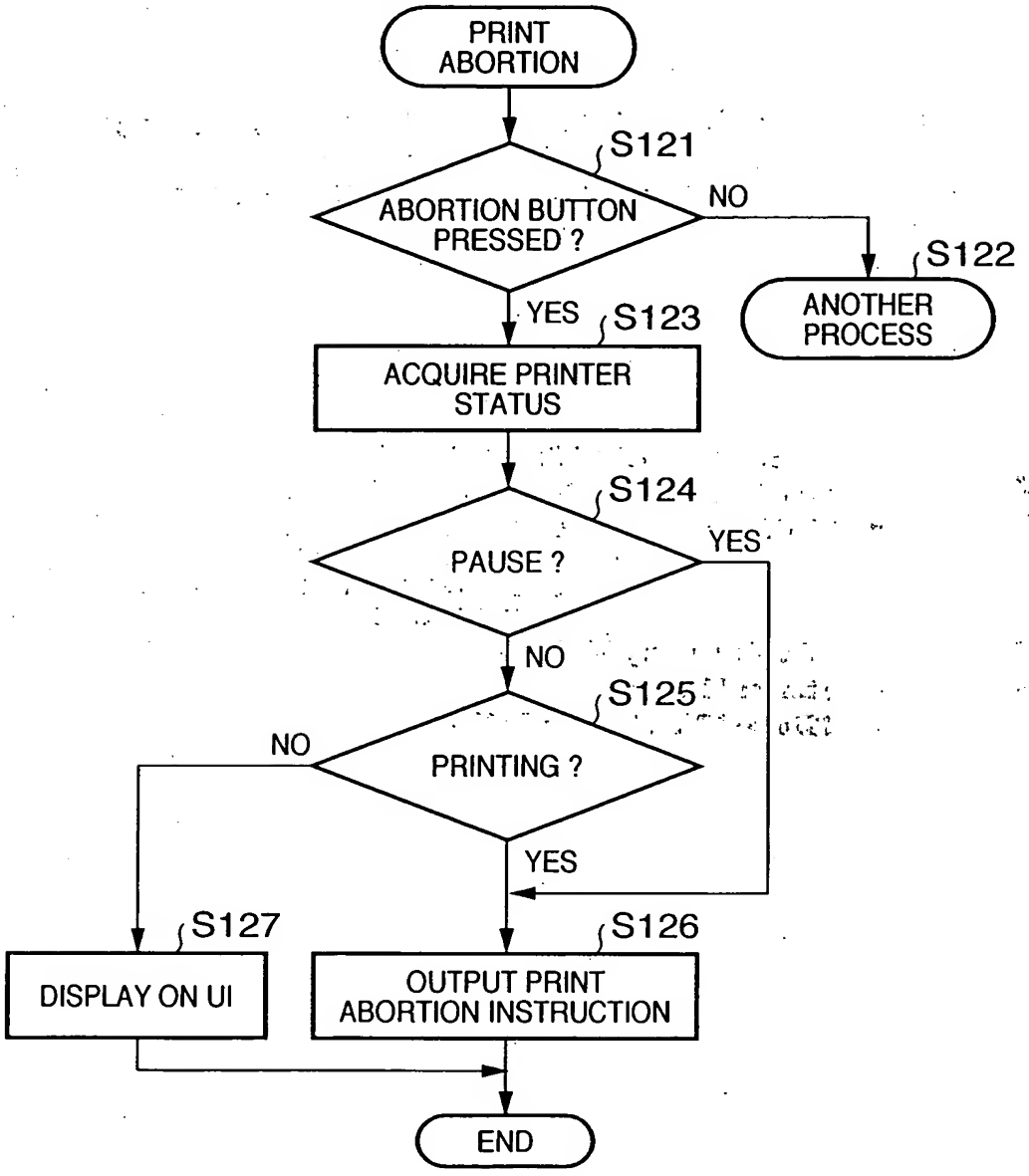

PRINT ABORTION
S121
ABORTION BUTTON PRESSED ?
NO
S122
ANOTHER PROCESS
YES
S123
ACQUIRE PRINTER STATUS
S124
PAUSE ?
YES
NO
S125
PRINTING ?
NO
YES
S127
DISPLAY ON UI
S126
OUTPUT PRINT ABORTION INSTRUCTION
END

FIG. 13

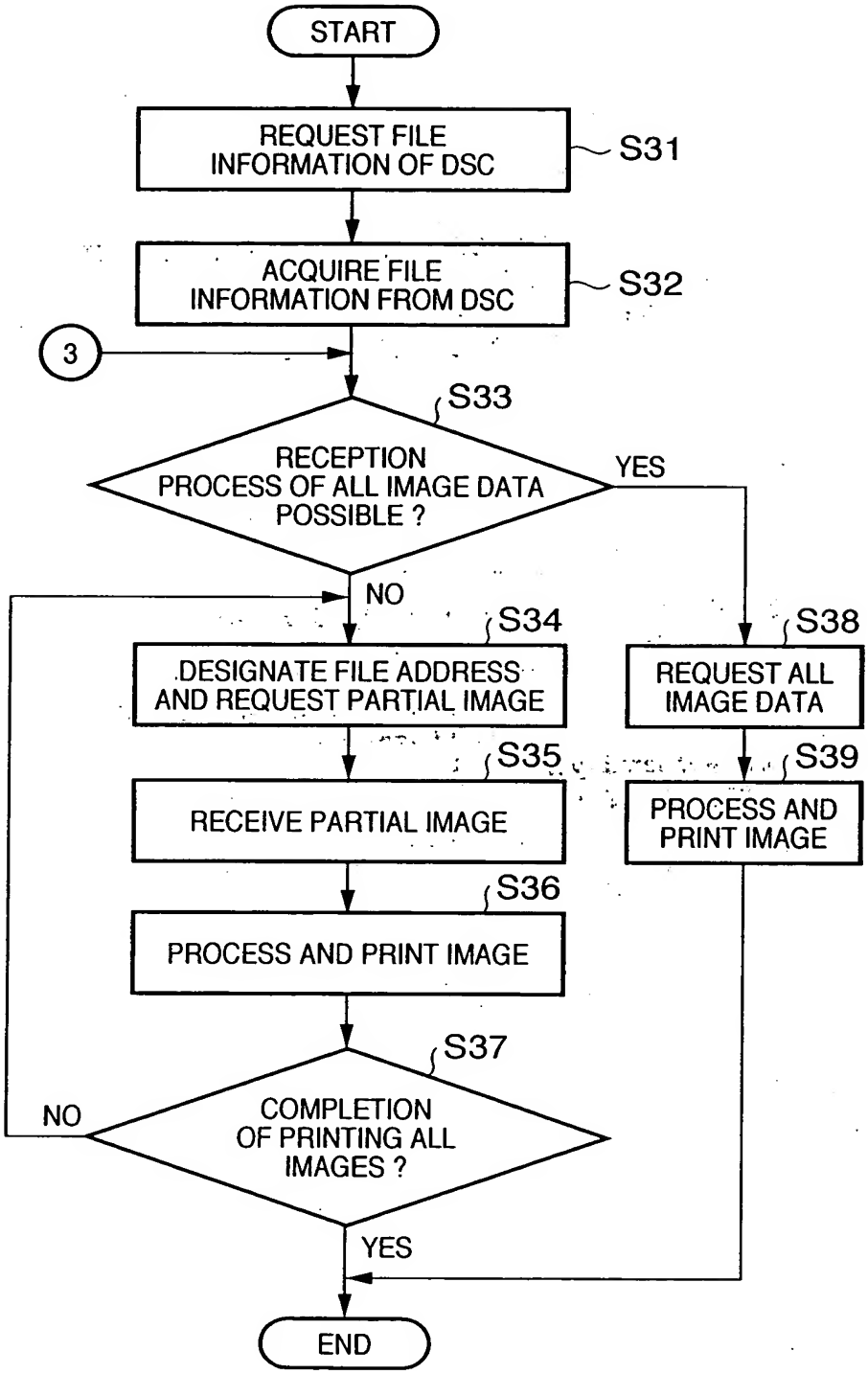

START
REQUEST FILE INFORMATION OF DSC
S31
ACQUIRE FILE INFORMATION FROM DSC
S32
3
S33
RECEPTION PROCESS OF ALL IMAGE DATA POSSIBLE ?
YES
NO
S34
DESIGNATE FILE ADDRESS AND REQUEST PARTIAL IMAGE
S35
RECEIVE PARTIAL IMAGE
S36
PROCESS AND PRINT IMAGE
S37
NO
COMPLETION OF PRINTING ALL IMAGES ?
YES
S38
REQUEST ALL IMAGE DATA
S39
PROCESS AND PRINT IMAGE
END

FIG. 14

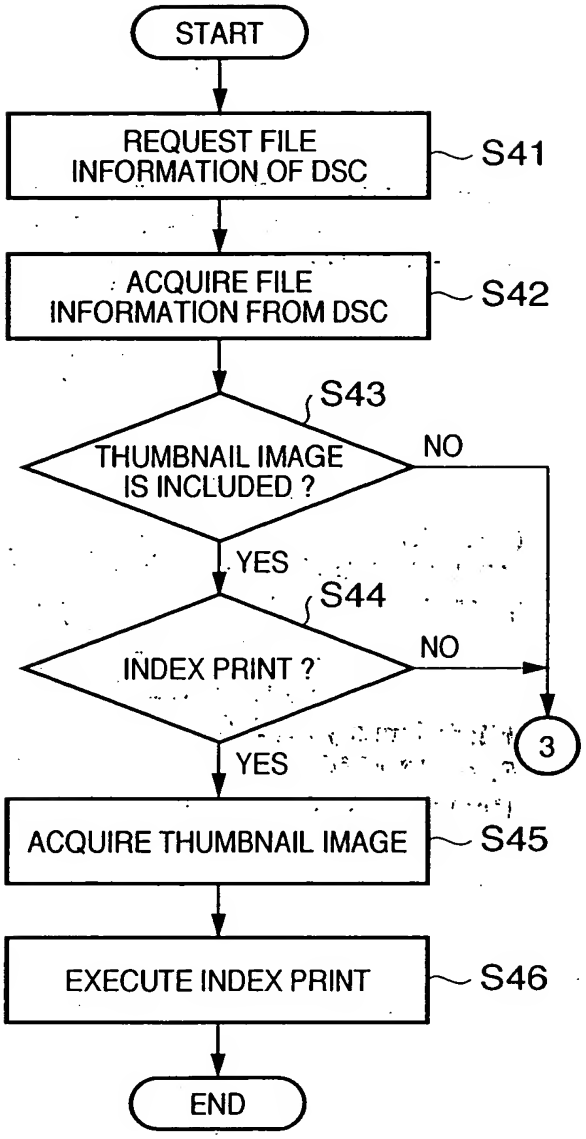

START
REQUEST FILE INFORMATION OF DSC
S41
ACQUIRE FILE INFORMATION FROM DSC
S42
S43
THUMBNAIL IMAGE IS INCLUDED ?
NO
YES
S44
INDEX PRINT ?
NO
3
YES
ACQUIRE THUMBNAIL IMAGE
S45
EXECUTE INDEX PRINT
S46
END

FIG. 15

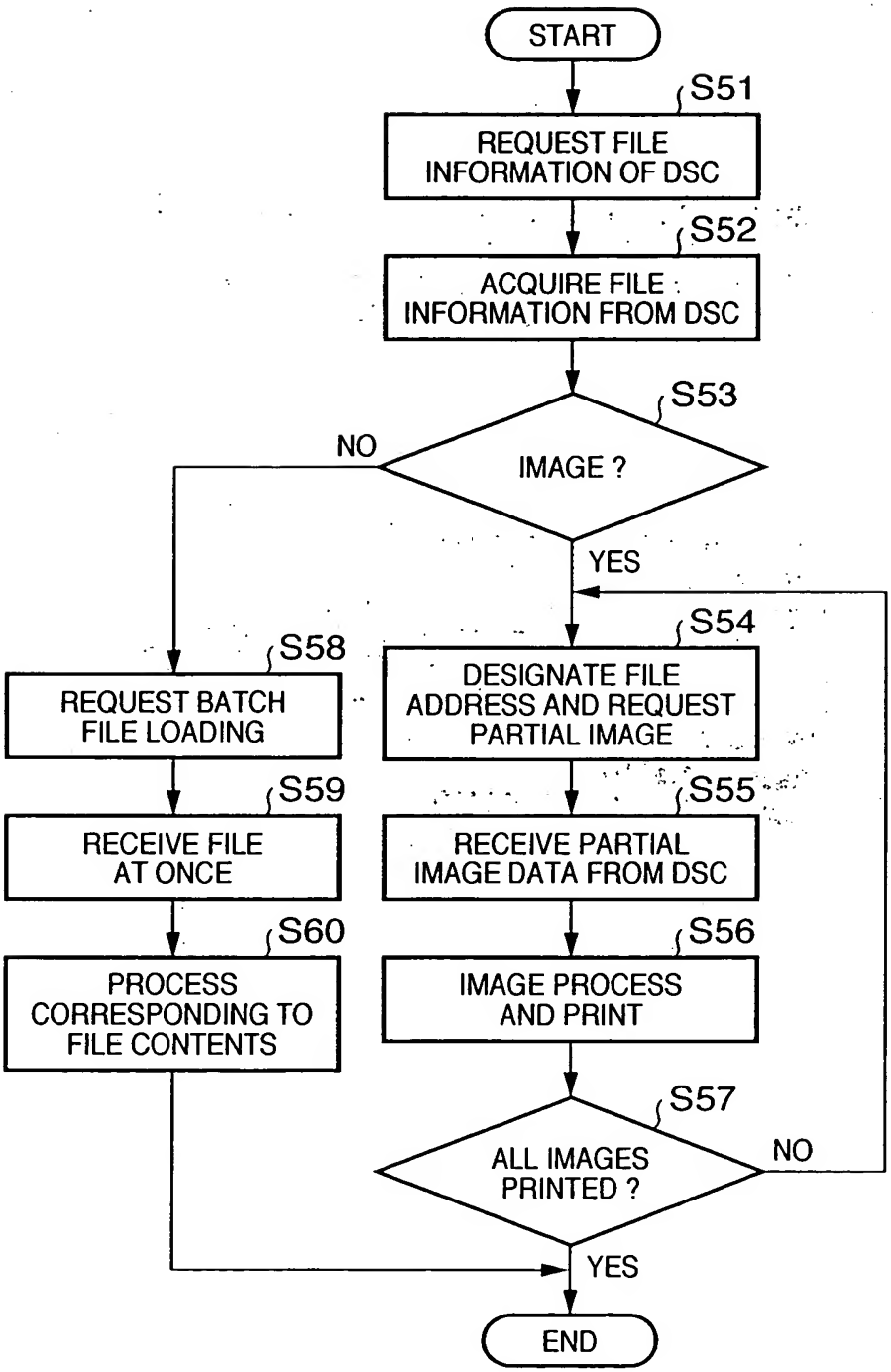
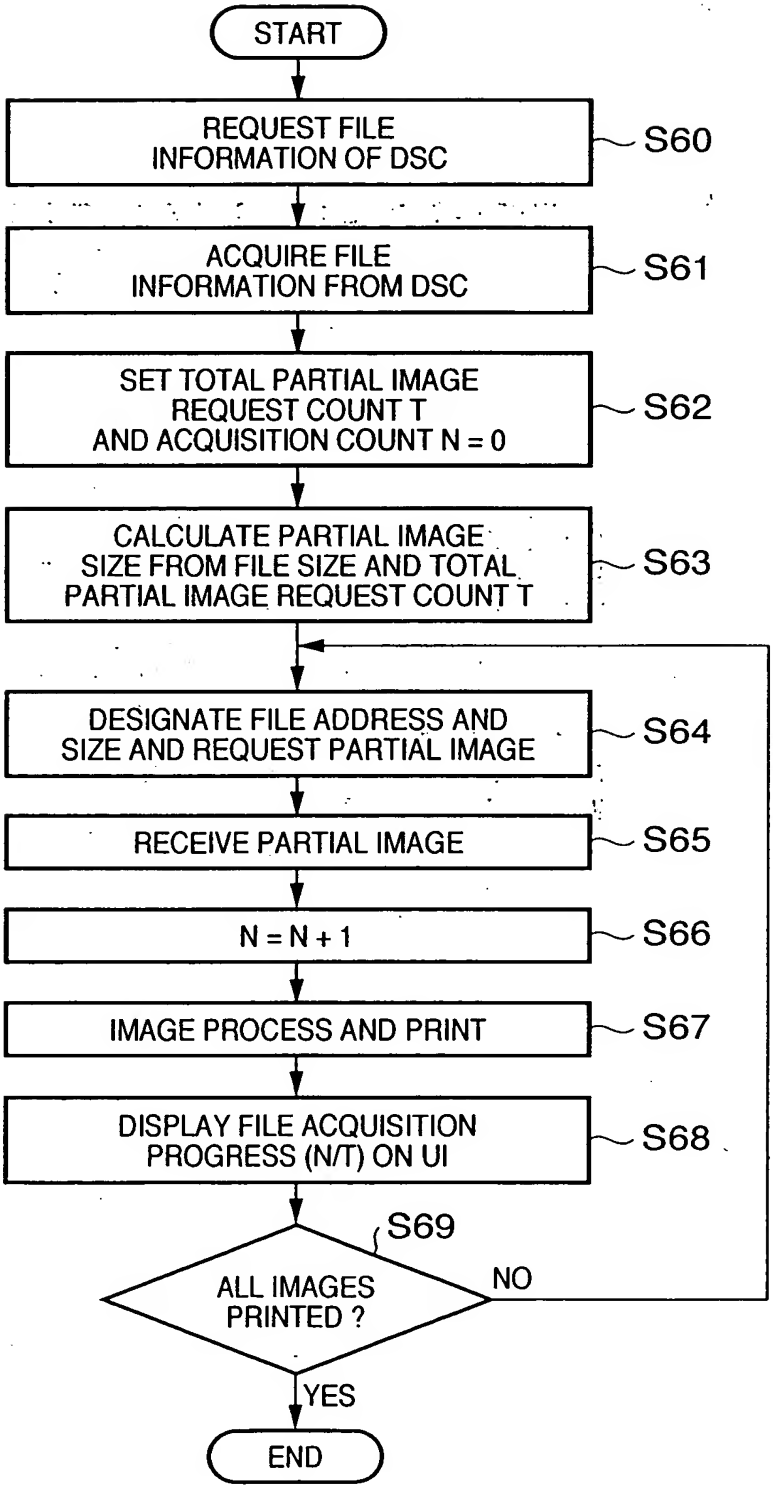

START
S51
REQUEST FILE INFORMATION OF DSC
S52
ACQUIRE FILE INFORMATION FROM DSC
S53
IMAGE ?
NO
YES
S54
DESIGNATE FILE ADDRESS AND REQUEST PARTIAL IMAGE
S55
RECEIVE PARTIAL IMAGE DATA FROM DSC
S56
IMAGE PROCESS AND PRINT
S57
ALL IMAGES PRINTED ?
NO
YES
S58
REQUEST BATCH FILE LOADING
S59
RECEIVE FILE AT ONCE
S60
PROCESS CORRESPONDING TO FILE CONTENTS
END

FIG. 16


START
REQUEST FILE INFORMATION OF DSC
S60
ACQUIRE FILE INFORMATION FROM DSC
S61
SET TOTAL PARTIAL IMAGE REQUEST COUNT T AND ACQUISITION COUNT N = 0
S62
CALCULATE PARTIAL IMAGE SIZE FROM FILE SIZE AND TOTAL PARTIAL IMAGE REQUEST COUNT T
S63
DESIGNATE FILE ADDRESS AND SIZE AND REQUEST PARTIAL IMAGE
S64
RECEIVE PARTIAL IMAGE
S65
N = N + 1
S66
IMAGE PROCESS AND PRINT
S67
DISPLAY FILE ACQUISITION PROGRESS (N/T) ON UI
S68
S69
ALL IMAGES PRINTED ?
NO
YES
END